

# HP Thin Client Family



HP Thin Clients deliver the tools for simple cloud manageability and control. Plus with powerful security and productivity-maximizing features, experience the added benefit of IT peace of mind.

HP Thin Clients give you the tools to easily rule the cloud—with features from HP, like HP Device Manager and HP EasyShell<sup>18</sup>. So you can set up, manage and monitor thousands of HP Thin Clients remotely from a single point.

With features like multi-display support, remote access to your data, and cloud optimized OS options, your users can be at their most productive whether at the office or on the go.



## HP Zero Clients

### Zero in on a better VMware client.

HP Zero Clients are designed for VMware environments with the latest PCoIP technology ideal for graphics-intensive applications that need workstation-like performance and support for dual monitors.<sup>1</sup> No operating system or moving parts mean HP Zero Clients require zero management. Deployment is simple and viruses are history. As HP's most secure endpoints, HP Zero Clients keep your data safe in the datacenter—only pixels are transferred. Hardware USB authorization and fiber NIC<sup>2</sup> add extra layers of security. Designed for fast PCoIP, Amazon Workspace and VMware, HP Zero Clients are an ultra-low-cost-per-seat solution with ultra performance and reliability.



## HP Thin Clients

### Customize your level of performance, security and manageability.

Pair the thin client form factor of your choice with the operating system of your choice, including Linux<sup>®</sup>-based **HP Smart Zero** and **HP ThinPro**, or **Windows Embedded**. Choose the processing power that matches your productivity needs, whether it's for mission-critical multimedia access, or everyday task-based demands. Support your growth with expansion options and legacy ports, choose native support for up to four digital displays, and maintain network adaptability with wired-in ethernet and Wi-Fi options. Get a cloud-ready and VDI-optimized thin client that's tested and certified for today's top ISV providers, including Citrix<sup>®</sup>, VMware<sup>®</sup> and Microsoft.



## HP Mobile Thin Clients

### Ultimate cloud convenience.

Mobile cloud computing is easier and more flexible than ever with HP Mobile Thin Clients. Employees can get the job done from just about anywhere thanks to professional cloud and VDI-optimized features with critical user and management software built right in. HP ThinPro and Windows-based programs and tools make it easy for everyone to log in and get to work with familiar tools and programs. No training required.

# HP Thin Client Operating Systems



## ThinPro OS

### More flexibility. More freedom.

Experience true efficiency and focus on your business instead of your IT with the easy customization, enhanced security, and simplified maintenance of the flexible, 64-bit Linux®-based HP ThinPro OS, which delivers up to 30% improved performance<sup>3</sup> over the predecessor 32-bit version. Rest easy with an OS that attracts few virus threats and has a locked file system to help against unauthorized updates, while the HP ThinPro Certificate Manager keeps all your relevant certificates in a single certificate store. With HP ThinPro, it's easy to customize user settings, properties, and permissions, rich graphic and terminal emulation connections, and more, as well as print locally and enable concurrent virtualization sessions.

For more information go to [hp.com/go/thinpro](http://hp.com/go/thinpro)



## Smart Zero Core

### The smarter zero client.

Configure it and forget it. It's that easy with the smarter HP Zero Client experience provided by HP Smart Zero technology. Everyone wins with an easy-to-navigate ecosystem for end users and simple setup and maintenance for IT that doesn't require specialized administrative support. Switch between HP Smart Zero and HP ThinPro, or customize your own experience—all from one centralized interface. HP Smart Zero supports five different Zero client experiences: Citrix® ICA®, Microsoft RDP, VMWare® Horizon™, VMware® Blast Extreme™, and a Firefox web browser.



## Windows Embedded OS

### A familiar interface.

Work efficiently on Windows Embedded Standard, the thin client operating system you're already well-acquainted with. The familiarity of a powerful Windows®-based environment will help reduce the cost of training and tools and make maintenance and roll-outs a breeze for end users, application developers, and IT administrators.

# HP Thin Client Software



## HP Device Manager

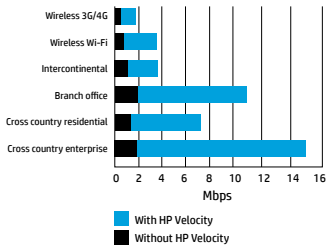
### Making your life easy to manage.

HPDM provides full life cycle management for HP Thin Clients; from initial discovery, deployment and configuration to maintenance and EOL of product. IT administrators can control and make decisions about their IT resources locally or remotely with HPDM which provides detailed asset information through a simple console “dashboard”. With just one software you can do it all—track, configure, upgrade, clone, and manage up to thousands of thin client devices.

For more information go to [hp.com/go/hpdm](http://hp.com/go/hpdm)

## Network performance improvements with HP Velocity

Figure 1. Effective network performances seen by user under different network conditions.

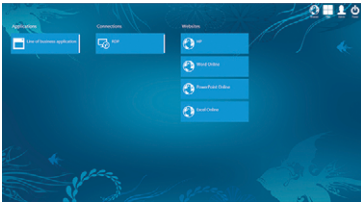


## HP Velocity

### Accelerate network performance.

Improve network performance and the end-user experience with HP Velocity software, which optimizes network traffic for remote desktops and application streaming, IDs and fixes bottlenecks, and simplifies IT troubleshooting.

For more information go to [hp.com/go/velocity](http://hp.com/go/velocity)



## HP EasyShell

### Quick. Simple. Customized.

Make your HP Thin Client Windows Embedded user experience easier than ever with HP Easy Shell<sup>18</sup>. Customize the intuitive interface and level of protection to fit your needs, and enjoy targeted control at a great price so you can make the most of your cloud infrastructure, VDI, and kiosk environments.

For more information go to [hp.com/go/easysshell](http://hp.com/go/easysshell)



## HP True Graphics

### Truly astounding cloud-based multimedia.

Experience breakthrough video playback, smooth graphics, and impressive high-speed performance of your cloud-based multimedia with HP True Graphics<sup>4</sup> for Windows<sup>®</sup>- and Linux<sup>®</sup>-based HP Thin Clients. Power through more applications, redirect H.264 content, and add heavy compute programs to your current environment with a solution that offloads tasks from the CPU.

For more information go to [hp.com/go/truegraphics](http://hp.com/go/truegraphics)



## HP Remote Graphics Software

### Work virtually anywhere.

Access your workstation or server-based graphic-rich applications and collaborate remotely in real time from any PC, Thin Client or Windows tablet with HP Remote Graphics Software (RGS).<sup>5</sup>

For more information go to [hp.com/go/rgs](http://hp.com/go/rgs)

## HP Desktop Thin Clients

| Series  | ThinPro, Smart Zero and Windows Embedded*  |   |   |  |
|---|--|---|---|--|
| Platforms   | t420   | t530  | t630  | t730   |
| <b>Processor and memory</b>   |  |   |   |  |
| Processor   | AMD GX-209JA SOC features a 1.0GHz dual-core APU <sup>7</sup>  | AMD GX-215JJ Dual-Core APU SoC with Radeon™ R2E Graphics (1.5 GHz base frequency, up to 2 GHz burst frequency, 1 MB cache) <sup>7</sup>   | AMD GX-420GI (2.0GHz - 2.2 GHz quad-core <sup>2</sup> ) APU with a Radeon R7E based graphics core   | AMD R-Series RX-427BB (2.7GHz– 3.6 GHz quad-core <sup>2</sup> ) APU with a Radeon HD 9000 based graphics core  |
| Flash/RAM <sup>8</sup>  | Up to 16GB flash/ 2GB SDRAM <sup>20</sup>  | Up to 512GB flash/up to 16 GB DDR4-1866 SDRAM <sup>20</sup>   | Up to 512GB flash/up to 32 GB DDR4-1866 SDRAM <sup>20</sup>   | Up to 128GB flash/up to 16GB SDRAM <sup>20</sup>   |
| <b>Video and audio (All HP desktop thin clients support widescreen resolutions and headphone/mic)</b> |  |   |   |  |
| Maximum resolution <sup>9</sup>   | 1920 x 1200  | 3840 x 2160 via DisplayPort™<br>1920 x 1080 via optional VGA output   | 3840 x 2160 via DisplayPort™<br>1920 x 1200 via optional VGA output   | 3840 x 2160  |
| Monitor support <sup>11</sup>   | 1 x DVI-D;<br>1 x VGA  | 2 x DisplayPort™;<br>1 x VGA (optional) <sup>24</sup>   | 2 x DisplayPort™;<br>1 x VGA (optional)   | 4 X DisplayPort™;<br>6 x DisplayPort™ (optional) <sup>22</sup>   |
| <b>Networking</b>   |  |   |   |  |
| Embedded Networking Interface   | LAN: Gigabit Ethernet (RJ-45)<br>WLAN: Intel® 802.11ac wireless with Bluetooth® (optional) <sup>13</sup> | LAN: Gigabit Ethernet (RJ-45)<br>WLAN: Intel® Dual Band Wireless-AC 3168 Wi-Fi/Bluetooth® combo (optional) <sup>13</sup><br>Intel® Dual Band Wireless AC 8265 Wi-Fi/Bluetooth® combo (optional) <sup>13</sup> | LAN: Gigabit Ethernet (RJ-45)<br>WLAN: Intel® Dual Band Wireless-AC 3168 Wi-Fi/Bluetooth® combo adapter (optional) <sup>13</sup><br>Intel® Dual Band Wireless AC 8260 Wi-Fi/Bluetooth® combo adapter (optional) <sup>13</sup><br>Allied Telesis Fiber Optic NIC (optional) <sup>13,23</sup> | LAN: Gigabit Ethernet (RJ-45)<br>WLAN: Intel® 802.11a/b/g/n/ac PCIe <sup>13</sup><br>Allied Telesis AT-27M2/SC M.2 Fiber Fast Ethernet Network Interface <sup>13</sup><br>Allied Telesis Fiber Optic NIC (optional) <sup>13,23</sup> |
| <b>I/O and expansion</b>  |  |   |   |  |
| Serial  | 0  | 0   | 1 (2nd port optional)   | 2  |
| Parallel  | 0  | 0   | 0   | 1  |
| PS2   | 0  | 0   | 2   | 2  |
| USB   | 4 USB 2.0  | Total: 6<br>3 USB-A 3.1<br>2 USB-A 2.0<br>1 USB 3.1 Type-C™   | Total: 7<br>2 USB 3.0<br>1 USB 3.0, hidden<br>4 USB 2.0   | Total: 9<br>2 USB 3.0<br>6 USB 2.0<br>1 USB 3.0, hidden  |
| Slot expansion options <sup>14</sup>  | No   | Yes<br>1 configurable port (choice of serial, VGA or coaxial port) <sup>24</sup>  | No  | 1 x half height PCI Express expansion slot<br>x16 physical slot wired as a x8 (rear)   |
| HP cable lock slot  | Yes  | Yes   | Yes   | Yes  |
| <b>Environmental certifications</b>   |  |   |   |  |
| ENERGY STAR®  | Yes  | Yes   | Yes   | Yes  |
| EPEAT® <sup>15</sup>  | Yes  | Yes   | Yes   | Yes  |
| Low Halogen <sup>21</sup>   | Yes  | Yes   | Yes   | Yes  |

## HP Zero Clients

| Series  | Zero Clients  |  |  |
|---|---|--|--|
| Platforms   | t310 G2   | t310 AiO                                   | t310 Quad Display  |
| <b>Processor and memory</b>   |   |  |  |
| Processor   | TERA2321<br>PCoIP<br>Zero Client processor                              | TERA2321<br>PCoIP<br>Zero Client processor | TERA2140<br>PCoIP<br>Zero Client processor   |
| System Memory <sup>8</sup>  | 32 MB/512 MB SDRAM  | 32 MB/512 MB SDRAM                         | 32 MB/512 MB SDRAM   |
| <b>Video and audio (All HP desktop thin clients support widescreen resolutions and headphone/mic)</b> |   |  |  |
| Maximum resolution <sup>9</sup>   | Dual displays: 1920 x 1200<br>Single display: 2560 x 1600 <sup>10</sup> | 1920 x 1080                                | Four displays: 1920 x 1200<br>Dual displays: 2560 x 1600 <sup>10</sup>                                 |
| Monitor support <sup>11</sup>   | 1 x DVI-I<br>1 x DisplayPort™   | 1 x DVI-I<br>1 x VGA                       | 1 x DVI-D;<br>1 x VGA  |
| <b>Networking</b>   |   |  |  |
| Embedded Networking Interface   | Gigabit Ethernet (RJ-45 interface)<br>1 Gbps Fiber NIC <sup>14</sup>    | Gigabit Ethernet (RJ-45 interface)         | Gigabit Ethernet (RJ-45 interface)<br>100Mbps Fiber NIC <sup>14</sup><br>1Gbps Fiber NIC <sup>14</sup> |
| Networking Options  | Wake on LAN (WoL) using magic packet.                                   | Wake on LAN (WoL) using magic packet.      | Wake on USB  |
| <b>I/O and expansion</b>  |   |  |  |
| USB   | 6 USB 2.0   | 6 USB 2.0                                  | 4 USB 2.0  |
| Slot expansion options <sup>14</sup>  | No  | No   | No   |
| HP cable lock slot  | Yes   | Yes  | Yes  |
| <b>Environmental certifications</b>   |   |  |  |
| ENERGY STAR®  | No  | No   | No   |
| EPEAT® <sup>15</sup>  | No  | No   | No   |

## HP Mobile Thin Clients

| Series  | Mobile  |   |
|---|---|---|
| Platforms   | mt43  | mt21  |
| <b>Processor and memory</b>   |   |   |
| Processor   | AMD PRO A8-8600B APU (1.66 up to 3 GHz, 2 MB cache, 4 cores <sup>7</sup> ) with Radeon™ R6 Graphics   | Intel® Celeron® 3865u with Intel HD Graphics (1.8 GHz, 2 cores <sup>7</sup> )   |
| System Memory <sup>8</sup>  | Up to 8 GB  | Up to 8 GB  |
| <b>Operating System and Flash</b>   |   |   |
| Operating System  | Windows 10 IoT Enterprise <sup>19</sup>   | Windows 10 IoT Enterprise <sup>19</sup><br>HP ThinPro with Smart Zero Core  |
| Flash   | 128GB M.2 flash drive   | 128GB M.2 flash drive   |
| <b>Video and audio (All HP desktop thin clients support widescreen resolutions and headphone/mic)</b> |   |   |
| Maximum resolution <sup>9</sup>   | 1920 x 1080   | 1920x1080   |
| Monitor support <sup>11</sup>   | 1x DisplayPort™<br>1x VGA   | 1x VGA<br>1x HDMI   |
| Touchscreen support <sup>12</sup>   | No  | No  |
| <b>Networking</b>   |   |   |
| Integrated  | Broadband Wireless (WWAN):<br>HP It4120 Qualcomm® Snapdragon™ X5 LTE Mobile Broadband Module<br>HP hs3210 HSPA+ Mobile Broadband<br>Wireless LAN (WLAN):<br>Intel® Dual Band Wireless-AC 7265: 802.11 a/b/g/n/ac (2x2) Wi-Fi + Bluetooth® 4.2 Combo13<br>Wired LAN:<br>Broadcom 5762 Gigabit Ethernet NIC with DASH support | Wireless LAN (WLAN):<br>Intel® Dual Band Wireless-AC 8265 802.11ac (2x2) Wi-Fi® + Bluetooth® 4.2 Combo<br><br>Wired LAN:<br>Realtek RTL 8111HSH Gigabit Ethernet  |
| <b>Peripheral support</b>   |   |   |
|   | 1x USB 3.0 Type A<br>1x USB 3.1 gen 1 Type-C™ (charging)<br>1x VGA output<br>1x DisplayPort™ video output<br>1x headphone/microphone combo jack<br>1x AC power interface<br>1x RJ-45 Gigabit Ethernet interface<br>1x Smart Card Reader<br>1x SD Multi-media Reader slot; supports SD, SDHC, SDXC                           | 2 x USB 3.1 Gen 1 (1 charging)<br>1x USB 3.1 Type-C™<br>1x VGA<br>1x HDMI<br>1x headphone/microphone combo jack<br>1x AC power interface<br>1x RJ-45 Gigabit Ethernet interface<br>1x SD Multi-media Reader slot; supports SD, SDHC, SDXC |
| <b>Security</b>   |   |   |
|   | TPM v2.0<br>Security lock slot  | TPM v2.0<br>Security lock slot<br>Pre-boot Authentication   |
| <b>Environmental certifications</b>   |   |   |
| ENERGY STAR®  | Yes   | Yes   |
| EPEAT® <sup>15</sup>  | Yes   | Yes   |
| <b>Dimensions</b>   |   |   |
|   | 13.3 x 8.9 x 0.74 in; starting at 3.48 lbs  | 13.23 x 9.37 x 0.79 in; 3.6lbs  |

## HP Thin Clients

| Software specifications                        | Windows 10 IoT Enterprise for Thin Clients <sup>19</sup> | Windows Embedded Standard 7E/7P <sup>16</sup>    | HP ThinPro                                  | HP Smart Zero Technology <sup>17</sup>      |
|--|--|--|---|---|
| <b>Available Platforms</b>                     |  |  |   |   |
|  | HP t530, HP t630, HP t730, HP mt43, HP mt20              | HP t420†, t530†, HP t630†, HP t730‡              | HP t420, HP t530, HP t630, HP t730, HP mt20 | HP t420, HP t530, HP t630, HP t730, HP mt20 |
| <b>Applications</b>                            |  |  |   |   |
| ICA/RDP  | •  | •  | •   | •   |
| VDI brokers                                    | •  | •  | •   | •   |
| HP TeemTalk Terminal Emulation                 |  | •  | •   |   |
| X Windows (X11R6)                              |  |  | •   |   |
| Java Virtual Machine                           | Add-on   | Add-on   | Add-on                                      | Add-on                                      |
| API compatibility                              | Win64  | Win32/Win 64                                     | Linux                                       | Linux                                       |
| Local browser                                  | Full Internet Explorer                                   | Full Internet Explorer                           | Mozilla Firefox                             | Mozilla Firefox                             |
| Media player                                   | •  | •  | Through VDI protocol                        | Through VDI protocol                        |
| PDF Reader                                     | •  | •  | •   | •   |
| ThinPrint print client (TCP/IP)                | Available directly from vendor                           | Available directly from vendor                   |   |   |
| <b>Security</b>                                |  |  |   |   |
| File protection                                | Unified Write Filter                                     | Enhanced Write filter or File based Write Filter | Read only file system                       | Read only file system                       |
| Locked configuration/accounts                  | •  | •  |   |   |
| Firewall                                       | Microsoft Firewall                                       | Microsoft Firewall                               |   |   |
| Smart Card support                             | •  | •  | •   | •   |
| <b>Management and User Experience Software</b> |  |  |   |   |
| HP Device Manager                              | •  | •  | •   | •   |
| Microsoft SCCM                                 | •  | •  |   |   |
| HP Remote Graphics Software (HP RGS)           | •  | •  | •   |   |
| HP Universal Print Driver                      |  | •  |   |   |
| Velocity (not offered on HP t420)              | •  | •  | •   | •   |
| HP Easy Shell                                  | •  | •  |   |   |
| HP True Graphics                               | •  | •  | •   | •   |

† 7E only

‡ 7P only



| Model    | OS Version          | VMware Horizon View HCL | Citrix Ready/HDX Ready |
|----------|---------------------|-------------------------|------------------------|
|          |                     | Horizon View Client     | XenDesktop/XenApp      |
| t310 G2  | No Operating System | Tera2 Certified         | N/A                    |
| t310 AiO | No Operating System | Tera2 Certified         | N/A                    |
| t420*    | HP ThinPro          | Certified               | Verified**             |
| t420     | HP Smart Zero Core  | Certified               | Verified**             |
| t420     | Windows Embedded    | Certified               | Verified**             |
| t530     | Windows Embedded    | TBD                     | TBD                    |
| t530     | HP ThinPro          | TBD                     | TBD                    |
| t530     | HP Smart Zero Core  | TBD                     | TBD                    |
| t630     | ThinPro             | Certified               | Verified               |
| t630     | HP Smart Zero Core  | Certified               | Verified               |
| t630     | Windows Embedded    | Certified               | Verified               |
| t730     | Windows Embedded    | Certified               | Verified               |
| mt20     | Windows Embedded    | Certified               | Verified               |
| mt20     | HP ThinPro          | Certified               | Verified               |
| mt20     | HP Smart ZeroCore   | Certified               | Verified               |
| mt43     | Windows Embedded    | Certified               | Verified               |

\* Availability varies by region

N/A – Certification is not applicable to this device

\*\* The HP t420 product was verified with Citrix HDX

- The resolutions your monitor displays and the multi-display modes (i.e. clone, spanning, extended/independent) supported in ICA, RDP or locally may vary. Number of monitors supported varies by model.
- t310 only
- Based on 64-bit vs. 32-bit and tested using x11perf comparing HP ThinPro 6.1 on an HP t620 Thin Client vs. HP ThinPro 5.2 on a similarly configured HP t620 Thin Client.
- HP True Graphics requires an HP Thin Client with an HP ThinPro 5.0 or higher operating system (combo OS with HP Smart Zero Core begins at v5.0), AMD processing technology, and a Citrix® virtual desktop infrastructure—XenApp® or XenDesktop® v7.0 or higher or WES 7E 32-bit/Windows 10 IoT with a Citrix® 4.4 receiver and Citrix® virtual desktop infrastructure—XenApp® or XenDesktop® v7.0 or higher. HP True Graphics is preinstalled on the OS starting with HP ThinPro 5.2. See product QuickSpecs for exact compatibility.
- HP Remote Graphics Software requires Windows and internet connection.
- This system requires a 64-bit operating system and 64-bit software products to take advantage of the 64-bit processing capabilities of AMD technology. Multi-core processing available with AMD technology is designed to improve performance of this system. Given the wide range of software applications available, performance of a system including a 64-bit operating system will vary.
- Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance will vary depending on your hardware and software configurations. Intel® AMD's numbering is not a measurement of clock speed.
- Maximum memory capacities assume Windows 64-bit operating systems or Linux. With Windows and Linux 32-bit operating systems, memory above 3 GB may not all be available due to system resource requirements.
- The resolutions your monitor displays and the multi-display modes (i.e. clone, spanning, extended/independent) supported in ICA, RDP or locally may vary. Number of monitors supported varies by model.
- With custom single-to-dual DVI conversion cable, sold separately.
- 64 MB or more memory reserved for video. 42 GB/1 GB SKU available in North America. Up to 1 GB may not be available in 4GB configurations with 32-bit operating systems due to system resource requirements. Flash and RAM maximum vary with OS.
- Touchscreen support varies by OS. Not supported by Windows Embedded Standard 7E, Windows CE, or HP Smart Zero Client Technology.
- Wi-Fi and WWAN modules are sold as optional modules and must be configured at the factory. WWAN requires a separately purchased service contract with a wireless service provider. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions. The Wi-Fi adapter provides Wi-Fi access only. WLAN requires wireless access point and Internet service is required and is not included with the purchase of a Wi-Fi adapter. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices.
- Options sold separately. Availability varies by country.
- EPEAT® registered where applicable. EPEAT registration varies by country. See [peat.net](http://peat.net) for registration status by country.
- Windows Embedded Standard 7 products require 8 GB or more Flash memory.
- Configurable for one protocol at a time.
- HP Easy Shell is currently available on HP Thin Clients with a Windows Embedded OS.
- Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.
- Graphics chipset uses part of the total system memory (RAM) for graphics performance. System memory dedicated to graphics performance is not available for other use by other programs. WES 7E is a 32-bit operating system and only recognizes up to 3.2 GB RAM.
- External power adapters, power cords, cables and peripherals are not low halogen; service parts obtained aftermarket may not be low halogen.
- An optional AMD FirePro™ W2100 discrete graphics solution provides two additional digital video streams for a system total of six video outputs.
- Fiber NIC cannot be installed simultaneously with Wi-Fi
- You can configure an additional port between one of three optional I/O features: Serial, VGA or an External Antenna port. The optional VGA port does not increase the number of supported displays.

For more information visit

[hp.com/go/thin](http://hp.com/go/thin)

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